

### **REMARKS**

Claims 1-39 are currently pending. Claims 37, 38, and 39 have been further amended to clarify that data content is communicated to an in-band on-channel (IBOC) network for digital radio broadcast transmission. The amendments to these claims are not intended to narrow the claim scope. Reconsideration is respectfully requested.

### **Art Rejections**

The Office Action includes a rejection of claims 1, 5-6, 8-9, 11, 13-18, and 37-39 under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,944,430 (“Berstis”) in view of U.S. Patent Publication No. 2003/0009765 (“Linden”). The Office Action also includes a rejection of claims 2-4, 7, 10, 12, and 19-36 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Berstis in view of various secondary references — U.S. Pat. Pub. No. 2002/0044567 (“Voit”), U.S. Pat. No. 5,935,218 (“Beyda”), and U.S. Pat. No. 6,782,510 (“Gross”). These rejections are respectfully traversed.

### **One of skill in the art would not have combined Berstis and Linden to arrive at the claimed invention, contrary to the Examiner’s suggestion**

The claims at issue all relate to components or events found or occurring at the *transmit* side of an in-band on-channel (IBOC) *broadcast* system. For example, claims 1 and 19 explicitly recite an *IBOC transmitter broadcasting* data content. Claims 37, 38, and 39 all explicitly recite communicating data content to an IBOC network for digital radio *broadcast transmission*.

Contrary to the Examiner’s suggestion, one of ordinary skill in the art would not have sought to transform the automotive radio *receiver* system of Berstis into a *transmitter* system in view of Linden to arrive at the claimed invention. Berstis is directed to time shifting for an

automotive radio *receiver* system, and there is nothing in Berstis or Linden to suggest transforming that automotive radio *receiver* system into some type of hypothetical mobile, vehicle-based, in-band on-channel (IBOC) radio broadcast *transmitter* system, which is evidently what the examiner is suggesting. Berstis discloses that a user may select a desired playback schedule and playback format for the automotive radio receiver system and may also select which broadcast programs are stored by the system, which broadcast frequencies are scanned, and how long each broadcast program is stored in memory. (*See, e.g.*, Berstis, Abstract, Title, col. 1, lines 10-12, claims 1, 10, 19-21.) Berstis describes “a system and method for implementing user specific preferences on the vehicle onboard computer system for regulating the operation of a *vehicle audio subsystem*” wherein the audio subsystem “would allow each operator to select preferred AM/FM radio stations, compact discs, or tape selections for listening.” (Berstis, col. 1, lines 12-15 and col. 10, lines 8-9, emphasis added.). Linden, on the other hand, describes an on-demand radio broadcast system, including IBOC transmission, in which a communications channel is divided into a plurality of time segments of different priority and in which receivers have the capability to store received programs.

The Examiner, while acknowledging that Berstis fails to disclose an IBOC transmitter, looks to Linden for that subject matter and alleges that it would have been obvious to combine the automotive receiver of Berstis with an IBOC transmitter described in Linden “to support IBOC broadcasting.” The Examiner’s suggested combination is unsupportable. One of ordinary skill in the art would not seek to transform an automobile radio receiver into an IBOC radio broadcast transmitter system. IBOC radio broadcast transmitter systems typically require, among other things, an infrastructure including a building to house the necessary components, a tall radio broadcast transmission tower and

antenna, a high-power radio broadcast transmitter, as well as a staff of people to support and operate the radio broadcast system. In contrast, automotive radio receivers receive radio broadcasts under the control of the vehicle driver and/or passengers. Is the Examiner really suggesting that it would have been obvious to transform radio receivers present in automobiles into IBOC radio broadcast transmitters? The Examiner's rejection on its face is plainly erroneous and cannot stand. Withdrawal of the rejection and allowance of independent claims 1, 19, 37, 38 and 39 is requested for at least these reasons.

In addition, the Office Action fails to articulate a proper reason for the hypothetical combination as required by *KSR Int'l Co., v. Teleflex, Inc.* The Office's alleged reason for combining Berstis with the Linden is "to support broadcasting IBOC." (Office Action at p. 4.) This alleged reason lacks specificity and is erroneous for at least for reasons described above. If there is a need to "support broadcasting IBOC," surely those skilled in the art would understand that appropriate ways to do so would be to convert more existing radio broadcast stations to have the capability to transmit IBOC or to build more radio stations for transmitting IBOC, not to attempt to convert automobile radio receivers into mobile, vehicle-based IBOC radio broadcast transmitter systems. There is simply nothing disclosed in Berstis or Linden to suggest the desirability of converting an automotive radio receiver subsystem into an IBOC radio broadcast transmitter. The Office's proffered reason is deficient on its face. The rejection of the independent claims should be withdrawn at least for this additional reason.

**Even if hypothetically combined, the applied references would not yield  
the claimed invention**

Even if hypothetically combined as suggested by the Office, the applied references would not yield the claimed invention. As noted above, the claims at issue all relate to components or events found or occurring at the *transmit* side of an in-band on-channel

(IBOC) *broadcast* system. Claims 1 and 19 both recite an IBOC transmitter broadcasting data content after an arbitrator determines relative levels of data content based upon priority indicators, service categories, and service classes of said data content and a scheduler sequences said data content for broadcast based upon the relative levels of data content. Claims 37, 38, and 39 similarly recite communicating data content to an IBOC network for digital radio broadcast transmission after determining relative levels of data content based upon priority indicators, service categories, and service classes of said data content and sequencing said data content for broadcast based upon said determining of relative levels of data content.

In contrast, Berstis cannot disclose the claimed features because Berstis is directed to subject matter that occurs *after* receiving a radio broadcast at radio *receiver*. All of the subject matter the examiner relies upon in Berstis at col. 1, lines 45-55, col. 17, lines 2-27, and col. 17, line 45 through col. 18, line 65, and Figures 11, 12, 13A, 13B and 22 relates to subject matter that occurs at an automotive radio *receiver* subsystem. There is nothing in Linden to suggesting transforming the events occurring at the automotive radio receiver of Berstis to occur in an IBOC transmitter. As such, even if hypothetically combined as suggested by the Office, the applied references would not yield the claimed invention. The rejections against independent claims 1, 19, 37, 38 and 39 should be withdrawn for this additional reason.

In addition, the intelligent digital broadcast scheduling system of claims 1 and 19 includes an arbitrator that determines relative levels of data content based upon priority indicators, service categories, and service classes of data content. Claims 37, 38 and 39 recite a method, a system, and a computer readable medium, respectively, that involve, *inter alia*, determining relative levels of data content based upon priority indicators, service categories,

and service classes of the data content. However, the Examiner has not described in the rejection what allegedly corresponds to the priority indicators, service categories, and service classes of data content that are required by claims 1, 19, 37, 38, and 39. In this regard, the Examiner simply makes broad, conclusory statements and cites to Figs. 11; 12; 13A; 13B & 22; col. 1, lines 45-55; col. 17, lines 20-27; and col. 17, line 34 to col. 18, line 65. These sections describe among other things all the actions a user can take to specify playback schedule and playback format but the Office has entirely failed to identify subject matter corresponding to priority indicators, service categories, and service classes of data content. Furthermore, Applicants see no disclosure of these items in Berstis. The rejections against independent claims 1, 19, 37, 38 and 39 should be withdrawn for at least these additional reasons.

In addition, if the Office intends to maintain this rejection, Applicants request that the Examiner explicitly identify what allegedly corresponds to the claimed priority indicators, service categories, and service classes of data content without general, broad citations to large sections or overall figures of Berstis.

Applicants further point out that determining relative levels of data content based upon priority indicators, service categories, and service classes of data content according to the present application provides a more flexible approach for scheduling content for broadcast transmission than is disclosed or suggested by the cited art. For example, as reflected in FIG. 3 of the present application, service classes (*e.g.*, basic, preferred, premium, etc.) and priority (*e.g.*, normal, urgent, emergency) provide substantial flexibility in scheduling content, and the addition of service category (*e.g.*, unknown/unspecified, administrative, maintenance, talent announcement, advertisement, news, sports, weather, traffic, emergency, alert, stocks, entertainment, restaurants, lodging, medical, health,

hospitals, multimedia, audio, logo, text, etc.) significantly increases the information from which relative levels of data content can be determined and upon which scheduling decisions can be made. Such flexibility is not disclosed or suggested by Berstis or Linden. For at least these additional reasons, the rejections over Berstis and Linden should be reconsidered and withdrawn.

Claims 2-4, 6, 7, 10-12, and 20-36 depend variously from claims 1 or 19, and are therefore allowable at least by virtue of dependency.

**Request for Telephone Interview**

Should the Examiner believe that this Amendment does not place the application in condition for allowance, it is respectfully requested that the Examiner contact the undersigned for a telephone interview prior to issuing another Office Action, so that any remaining issues can be promptly resolved.

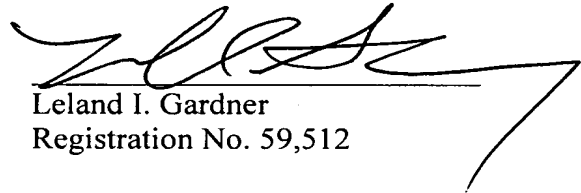
**Conclusion**

In light of the remarks above, withdrawal of the rejections and allowance of this application are respectfully requested. Should there be any questions in connection with this application, the Examiner is invited to contact the undersigned at the number below.

It is believed that no fees are due with the submission of this paper. However, the Commissioner is authorized to charge any fees that may be required by this submission to deposit account 50-3013.

Respectfully submitted,

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